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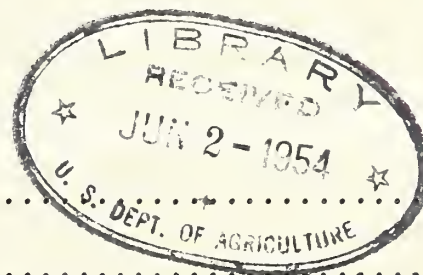
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UNITED STATES DEPARTMENT OF AGRICULTURE,
Human Nutrition Research Branch
in cooperation with
UNIVERSITY OF MINNESOTA,
Laboratory of Physiological Hygiene, and
MINNESOTA AGRICULTURAL EXPERIMENT STATION

Study of the Diets of a Selected Group
of Middle-Aged and Older Business and Professional Men

Instructions for Interviewers

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Introduction

Object of study.--To determine the food consumed by a selected group of men in order to provide data for studying the relationship between diet and evidence of aging as found by medical and laboratory examination.

The subjects.--The subjects will be selected from a group of about 300 business and professional men in Minneapolis who are under continuing observation in long-time studies of aging being made by the Laboratory of Physiological Hygiene of the University of Minnesota's College of Medical Sciences. Since 1947, scientists of that Laboratory have been making clinical, biochemical, physiological, morphological, and psychological measurements annually on these men. Information on the diets of 59 men was collected in March 1953.

Plan of work for collection of dietary data.--Under the direction of interviewers of the Human Nutrition Research Branch of the Agricultural Research Service information will be obtained on prepared forms regarding the food intake of the men, at home and away for a 1-week period. About 70 men will be included in the second collection of data, March to April 1954. The rest of the men will be included in later collections.

The men will keep records of food eaten away from home. Their wives will be asked to help them keep records of meals eaten at home. Each has another important responsibility. The men must continue to eat at home and away from home just as they would if they were not keeping food records. Their wives must continue to serve the men the same kind of food they would serve them if they were not keeping food records.

The interviewers will visit the home (or office) of each man at appointed times to perform the following duties:

1. At the first visit:

- a. Obtain from the man and his wife information on the kind and amount of food the man ate during the last 7 days (Sec. A).
- b. Obtain from the man history of his past food consumption (Sec. B).
- c. Instruct the man and his wife in measuring and weighing the man's food and in recording the kind and amount of food eaten (Sec. C, D, E, and F).
- d. Set up the spring scale on a level surface in a well-lighted spot.
- c. Check on weight of the man and get history of his past weight (Sec. G).

2. At all other visits: 871257
 - a. Assist with the recording of difficult data.
 - b. Check on the reasonableness, consistency, and completeness of recorded data.
 - c. Collect the completed daily records of food eaten at home and away from home (Sec. C and E).
3. At the final visit (in addition to duties above in item 2):
 - a. Obtain recipes for any food mixtures which have occurred several times during record period and for any which are unusual (Sec. F).
 - b. Collect the completed forms of Sec. D, Food Set Aside for Personal Use.
 - c. Obtain man's estimate of his physical activity during the last week (Sec. H).
 - d. Check on weight of man (at same time of day as initial weighing) (Sec. G).
 - e. Thank man and his wife for their cooperation.

The interviewer will also confer with the managers of school and club dining rooms, cafeterias, restaurants, and other public eating places the men have eaten at when necessary to get size and/or content of portions of food the men have eaten at their establishments. Usually, however, the men will be able to get this information.

Length of record period.--The men will be asked to keep their food records for a 1-week period. Records will be kept for 1 complete week starting on any day and meal convenient to the couple and the interviewer.

Contacts with man and wife.--One interviewer will be assigned to each case. The interviewer will instruct the man and his wife together in their home.

The interviewer should return to the home the day after the record is started. From the way in which the record has been kept she can judge how often visits should be made. Telephone calls may be used to check on minor details. Probably no more than 3 days should elapse between home visits while the record is being kept. Unless specific questions need to be checked with the man contacts can be made through the wife.

Before going to work each day the man should give his wife the record of food eaten away from home that he filled for the previous day and take one or two blank forms with him to fill for that day. At each visit the worker will collect all daily records for food at home and away from home filled to date.

The interviewer should make an appointment to see the man preferably with his wife at the end of the record period to get information on his physical activity during the last week and to check on his weight.

On the average the first interview with the man and his wife will probably last about 2 to 2-1/2 hours. If seen separately, allow 1 to 2 hours for the first conference with each one. Visits during the record period should usually be shorter--averaging perhaps only 1/2 hour. The final interview may average 1 hour.

Form 1. Sec. A. EATING PATTERN, LAST WEEK

Section A is a form for listing the kind and amount of food eaten by the man at meals and between meals during the 7 days immediately prior to the first interview. The man will be helped by his wife and both of them will be guided by the interviewer to recall the food eaten at home and away from home the previous week. Every food and beverage (except water) put in the mouth and swallowed should be included.

The interviewer should record the participant's full name and CVD No., her own name, and the beginning and ending dates of the week of the food list in the upper right hand corner (before leaving office).

In many instances recalling the week's menu will be the best approach to getting information for the food list. To jot this down Sec. A. Worksheet 1 should be used. Since breakfast is usually the simplest meal of the day and the least varied, it may be a good idea to start with this meal and fill it out for each day of the week. The main dish, especially at noon and evening meals, may be the key to the other foods eaten at them. Be sure to get foods eaten as snacks and in-between meals.

Columns (1 and 2). How much of each of these foods do you estimate you ate last week?

Column (1)--In col. (1) effort has been made to provide space for recording any food that might be eaten. If a man reports a food for which no place of entry can be found, enter it in the most appropriate place, well-labeled.

Column (1) calls for checks and other entries. Checks (✓) should be made to indicate such things as: (1) Kind of meat eaten and whether or not the amount reported includes bone, (2) kind of cheese, (3) ingredients in sandwiches, (4) extent to which fat on meat is eaten, (5) whether tomatoes eaten are canned or fresh or in form of juice,

(6) whether cooked or canned fruit has added sugar, (7) kind of bread-stuff used, (8) kind of spread used on bread and crackers, (9) kind of milk or cream used on cereal and in beverages, and (10) kind of sweetener, if any, used in beverages.

If there are two series of checks to be made on a line that will have two entries in column (2), numbers within checks will identify them. For example, if both pork chop and lamb chop were eaten, the entry might be as follows:

Chop: Pork 1/ lamb 2/ veal____ (bone 2/ no bone 1/)

Entries should be made in col. (1) to specify such description as: (1) Kind of game, poultry, fish or seafood, etc., and (2) name of food mixture using a name which indicates major ingredients.

At the extreme right of col. (1) the terms in which quantities should be reported in col. (2) are given. This will be discussed in the section on col. (2).

Column (2)--Enter here portion sizes.

Food at home will probably be reported somewhat differently from food eaten out. The best way to get the amount of a food eaten at home is to estimate it from the proportion the man ate of the amount bought for the family. The man's portion should be reported in terms of ounces. Use fluid measure in ounces for liquids. Such weights and measures will rarely be possible for food eaten away from home; these will usually be given in household measure and dimensions. Get the best estimate of amount the man and his wife can give readily. Although an entry of "small," "medium," or "large" serving is a last resort it is better than no entry.

Abbreviations used on the food list, col. (1), to indicate how to report food consumption follow:

oz	ounce(s)	med	medium
meas	measurements	lg	large
c	cup(s)	t	teaspoon(s)
sl	slice(s)	tb	tablespoon(s)
no.	number	caps	capsule(s)
sm	small	occ	occasionally

Ways of obtaining amount of food eaten is given in table 1 by type of food. Although designed for use in entering food on the food record, it is also a useful guide for the food list. In using it with the food list, certain limitations in getting estimated amounts of food already eaten need to be considered. Some necessary adjustments because of this follow:

1. "Weighed weight, cooked portion" will not be possible.
2. "Estimated weight, cooked portion" will only be possible from the few men and wives who are accustomed to think in such terms.
3. "Dimensions of cooked portion" can only be rough estimates. For irregularly-shaped chops try to get approximate measurement in inches of the widest end and of the thickest spot. For a piece of pie, try to get the proportion man ate of the whole pie and the diameter of the whole pie in inches; or get the approximate number of inches the wedge served measured at the wide (circumference) end.

The amounts of meat, poultry, fish, fruit, and vegetables reported on the purchase basis should be specified "A.P." which stands for "as purchased." For example, if 2 lb. of pork chops were purchased and it is estimated that the man ate one-sixth of it, the entry would be as follows:

1/3 lb. A.P.

It will not be necessary to label as "A.P." amounts estimated from household purchases of foods on which there is no waste like cheese, ready-to-eat cereal, butter, pie, cake, cookies, ice cream, milk, cream, and candy.

If a food was eaten more than once during the week, give the number of times a portion of the specified size was eaten. Consideration needs to be given to the fact that portion sizes of the same type of food eaten as second helpings or at different meals may be the same or may vary greatly. For example, a food list might have three entries for "pork chop **with** bone" as follows:

2(3" x 1/2"), 1(4" x 3/4"), 1/3 lb. A.P.

If a line is designed to take care of more than one food, there may be two or more entries in col. (2). For example, if both pork chop and lamb chop were eaten during the week of the list, the entries might be as follows:

pork 2(3" x 1/2") lamb 1(4" x 3/4")

Certain foods are entered in col. (1) more than once for ease in obtaining food consumption and to prevent under reporting. For example, "milk" can be listed as many as three times--once as a beverage in item 70, once as an accompaniment in item 48, and once as an addition to coffee or tea in item 67. Caution must therefore be exercised to prevent overreporting. Note that these foods are listed more than once:

Food:	Item on FE 13 in which food is reported					
	<u>1st time</u>	<u>2nd time</u>	<u>3rd time</u>	<u>4th time</u>	<u>5th time</u>	<u>6th time</u>
Meat.....	1-7	11	15			
Poultry.....	9	11	15			
Fish.....	10	11	15			
Egg.....	12	15				
Cheese.....	13	15	53			
Butter, margarine	16	35	40	43	49	51
Salad dressing..	16	29				
Bread, rolls....	17	39				
Fruit juice.....	38	74				
Peanut butter...	41	51				
Sirup.....	44	73				
Sugar.....	46	68	73			
Cream.....	47	66				
Milk.....	48	67	70			
Soft drinks.....	71	74				

Column (3) Did you eat as usual last week? If week-to-week variation or special events altered your food last week, tell how you usually eat.--
The purpose of this column is to find out whether the food consumption reported on the food list in columns (1) and (2) represents the kind and amount of food the man is currently eating in any 1 week.

The interviewer should look to see if the man's total food consumption was extraordinary in any way; for example, note if it was--

- High or low in calories
- High or low in consumption of any food
- Entirely lacking in a food most people eat
- Affected by Lent
- Affected by illness or other unusual circumstances

One way of finding out whether the food intake for the period is representative is to ask about questionable practices in the order of the foods in col. (1). Avoid any remark that might make the man or his wife feel that their food customs seem queer. Examples of possible comments and questions are:

"Did you have less meat and more eggs and fish this week because of Lent?"

"No eggs? Do you eat them occasionally?"

"Your record looks low in fat--no salad dressings, no gravies, no fried food, no pies, etc. Do you purposely keep your use of fat low?"

"No salads or other raw vegetables or raw fruits? Do you try to avoid foods high in roughage on purpose?"

"No mayonnaise or other salad dressing on salads? Do you ever add any?"

"Do you ever use butter on your bread? On your vegetables?"

"Do you ever vary your breakfast cereal? Or is it always cornflakes?"

"No desserts? Don't you eat sweets at mealtime? Perhaps you eat sweets between meals? Do you try to keep your use of sugar down?"

"Do you take both coffee and tea without cream or sugar?"

"Your menu has no milk on it. Do you ever drink milk?"

Another approach to finding out how typical the food consumption on the record is might be through meal patterns. Some examples of questions along this line follow:

"Your breakfast pattern was the same each day--a large glass of orange juice, a poached egg on toast, and coffee with cream and sugar. Do you occasionally vary it?"

"You mentioned no in-between snacks either at home or away from home. Do you sometimes eat between meals?"

If answers to questions indicate that the man's consumption of any food was atypical during the record period, give his usual consumption in col. (3). Alongside the food enter the amount he usually eats (specify whether per day or per week), and the frequency with which he eats that amount.

It may be that the man eats the foods in a group more or less frequently than he did during the 7 days of the food list. If so, bracket the foods in the group. For example, meats from "chop" to "bologna" might be included; or meats, poultry, and fish from "chop" to "Thick soup, etc."

Item 79. How does the total amount of food you ate last week compare with the amount you usually eat? Explain cause of any difference. The man might answer that he ate appreciably more or less than usual because of Lent, his own or wife's illness, special family or business occasion such as a child's marriage or a professional convention, reducing or other special diet, poor appetite, or extra physical activity.

Form 1. Sec. B. HISTORY OF EATING PATTERN

The purpose of section B is to find out whether there have been periods in the man's adult life when he ate differently from now and if so, when each such period was, what foods were eaten in smaller or larger quantity or in lower or greater frequency and approximately how much of each of these foods he used to eat and how often.

This is perhaps the most important section of the study's schedule forms since previous food habits may give light on present physical conditions and the onset of signs of aging not explained by current food practices.

Past eating patterns during adult life have been geared to two definite time points during the past 6 years--the men's most recent physical examination at the Lab. (winter 1954) and the beginning of their participation in the study (6 years ago). Prior to that each man should recall his food consumption as far back as he and the interviewer feel he is giving data on foods that can be converted into estimated quantities.

This section will be filled in consultation with the man at the time of the first interview, following section A. It will usually be helpful to have the man's wife present.

Column (1). Consider the foods in these groups. The groups of food in section B follow the order of foods in section A since kinds and quantities of foods listed on it are background information to be noted in filling section B.

Column (2). How does what you ate last week compare with what you were eating--At the time you had your recent physical examination at the Lab.?--
The men had their physical examinations between January and March 1954. Since at the most an examination will be only 4 months prior to the interview, it is expected that few of the men will report importantly different consumption for many foods. However, some of them may have started on a reducing or special diet since then. Some of them may have just begun to get cholesterol-conscious. Lent also may have had an effect.

It is an advantage to start with a recent period to get the men recalling their past food consumption. The ease with which it can be done should give them confidence to try to remember their earlier adult life.

If answers to questions indicate that a man's consumption of any food or group of foods was different at the time of his physical examination (from that of the last 7 days reported on the food list), give the approximate amount and the frequency with which it was formerly eaten. Be sure to specify whether the frequency given is per week or per day.

Enter only a dash for foods, consumption of which was similar in the two periods.

Column (3). How does what you ate last week compare with what you were eating--Just before you began to participate in this study--6 years ago?--Again being fairly recent and a definite point of time that is important in their lives these men should be able to recall any marked differences from their present food habits.

Column (4). How does what you ate last week compare with what you were eating--In the 6-year interval between then and now?--Hearing and reading about the work of Dr. Keys and others studying the aging process have made many of these men and their physicians conscious of the content of their diets especially in calories, fat, and cholesterol. Consequently quite a few of the men have cut down on foods high in these nutrients. Some of them have compensated for this by substituting or increasing the consumption of other foods. For example, from the 1953 collection we know that some are substituting skim milk for whole milk, milk for cream, and in salad dressing mineral oil for salad oil. Some are cutting the fat off meats and selecting lean meats only. Some are substituting protein-rich foods for calorie-rich foods, green vegetables for potatoes and bread, and raw fruit for desserts.

If a man has made substantial dietary changes such as those cited above or other types of change, find out the approximate year the change started and how he ate prior to the change. In col. (4) enter the year and the amount he formerly ate. Changes might be in quantity or frequency or both. Entries might read as follows:

<u>Food</u>	<u>Possible entry</u>
1. Meat, poultry, fish.....	1950 - 2/3 as much
3. Eggs.....	1950 - 2 a day
6. Bread, rolls, pancakes, crackers, etc.	1951 - 6 sl bread a day
7. Butter, margarines.....	1949 - 4 pats butter a day
8. Fried foods.....	1949 - 1-2 x a day
9. Bacon, fat on meat, gravy.....	1948 - ate fat on all meats
10. Macaroni, rice, etc.....	1950 - 2-3 x a week, 1C, Macaroni
11. Breakfast cereal.....	1950 - daily
13. Lettuce.....	1950 - none
14. Other greens.....	1950 - 1/2 as often
15. Salad dressing.....	1949 - made of salad oil then, amt.same
18. Citrus fruit, juice.....	1948 - juice about 1 x week.
20. Pie, cake, cookies, doughnuts, etc.	1951 - pie 1 x daily
22. Candy, sugar, saccharine, other low-calorie sweeteners.....	1951 - 1 t. sugar in coffee
24. Milk--extra rich, regular, skim, buttermilk.....	1948 - 1 gl. extra rich milk a day
25. Cream--heavy, light, 1/2 & 1/2....	1948 - 2 tb. light cream in coffee
27. Beer, wine, whisky.....	1950 - 1 highball nightly
28. Nuts, peanuts, popcorn, potato chips, cocktail snacks..	1950 - 3-4 salt crackers 1-in. cube American cheese (nightly)

Column (5). How does what you ate last week compare with what you were eating--During your earlier adult life--10, 20, 30 years ago? The purpose of these questions is to find out about the changes between late adolescence or early adulthood and the start of their participation in the study in the kind and amount of food the man has eaten.

Changes in living conditions, economic status, weight and health often affect eating patterns. It will be helpful in giving the information called for in column (5) to have the man consider whether his diet was affected when important changes occurred in his life. Knowledge of happenings in the man's life the interviewer may learn about during taking the food list may suggest guiding questions such as those below:

"In what ways was your diet different before you knew you had diabetes (or high blood pressure, or gastric ulcer, etc.)?"

"When did you find out you were allergic to milk? What then took the place of milk in your diet?"

"Did getting a denture affect your diet in any way?"

"When you started to gain (or lose) weight, did you try to eat less (or more)? Of what foods?"

"When did you belong to the weight control group? What diet did you follow then?"

"When the children married, did your home food practices change? Less milk? Fewer vegetables and salads? More meat and potatoes?"

"When you moved into this house with a home vegetable garden, did you start eating more vegetables? Which ones in particular?"

"When you married, did you find yourself eating new foods at home meals? According to a new menu pattern?"

"When you moved here from the Southwest.....?"

"When you came over from the old country (Sweden).....?"

"When your family moved from the country, did the accessibility of store foods and the absence of home produce change your diet in any way?"

"When you started to work, did you find the menu patterns in the restaurants you patronized different from the menu served in your home? Did it affect your eating practices?"

"When you went away to school (or started eating in the school lunch room), did you begin to eat new foods? More cooked vegetables or salads?"

Note that the questions above start with the recent past and go backward. For most men this will mean going from the best to the least well-known periods of life and will be the preferable order to use. However where indicated the questions might start with late adolescence and progress toward the present.

When questioning based on life periods does not seem feasible, ask about the consumption of the food groups in column (1). If more space is needed than provided for any food group use additional sheets. Be sure they carry identification of participant's name, section letter, and number and name of food group.

Form 1. Sec. C. FOOD EATEN AT HOME

Section C is a meal-by-meal record of food consumed at home and food carried from home in packed lunches. Every food and beverage, except water put in the mouth and swallowed must be recorded. Include gum and vitamin and mineral preparations. A sufficient number of Sec. C forms should be left in the home to cover the record period. Allow one for each day of the food record. (An equal number of copies of Sec. E forms is to be left for entering food away from home. See page 15.) Interviewer should enter her name and that of the man on each record form left in the home.

The day of the week should be encircled. The date should be entered in the proper places at the top of each form used. At each visit the interviewer will pick up the forms that have been filled since her last visit.

Urge the man to make his entries as soon after eating each food or meal as possible in order to prevent omissions of food eaten and inaccuracies in quantities.

Column (1), Menu.--In instructing the man in filling in the menu in column (1) of form 1, Sec. A, tell him to:

1. Enter the full common name for each food or beverage consumed.
2. Tell if a food was fresh, canned, frozen, dried, condensed, evaporated, smoked, cured, pickled, or salted.
3. Describe whether when eaten the food was raw, boiled, broiled, braised, fried, French fried, grilled, baked, creamed, buttered, scalloped, or mashed.
4. Give the kind of liquid (if other than water) used in soups, chowders, stews, and casseroles. For example, whether milk, cream, tomatoes, or canned soup.
5. Add any description that will help determine the nutritional content of each food. For example--
 - a. Whether milk is "extra rich" (4.5% butterfat), "regular" (3.5%), "skim" or buttermilk
 - b. Whether cream is "heavy" (30% butterfat), "light" (20%), or " $\frac{1}{2}$ " & " $\frac{1}{2}$ " (12%).
 - c. Whether ice cream is regular (10 - 12% butterfat) or extra rich (16 - 18%). Give brand name when richness is not known.
 - d. Whether chicken is a broiler, frier, roaster or stewing fowl.
 - e. Brand names for bread, crackers, cookies, cereal, cheese, canned food, and candy bars. Wrappers or labels on such foods (including rolls) should be saved when possible.

- f. Whether bread is white, rye, whole wheat, or other kind.
 - g. Whether bread and cereal is enriched (or reinforced) or not.
 - h. If greens were served with beets or turnips.
 - i. Whether potatoes were cooked peeled or in peel.
- 6. Use a separate line for each food or food mixture.
 - 7. Use a separate line for each food accompaniment served at the table. Food accompaniments include such items as cream, milk, and sugar for coffee and cereal; lemon for tea, fish, and salad; dressings for salad; gravies and sauces for meat, poultry, fish, and vegetables; sauces, whipped cream, wine, and nuts for desserts; catsup, pickles, and similar condiments; spiced fruits; jellies, jams, and marmalades; and sirup and honey.
 - 8. Enter on a separate line each sandwich ingredient -- bread, table fat, salad dressing, lettuce and other filling.
 - 9. Ignore food taken but not eaten.
 - 10. If a meal is missed, write "nothing" in the space for that meal. Do the same for in-between meals.
 - 11. If a meal is eaten "out" write "out" in the space for that meal. Do the same for in-between meals.

Column (2), Amount eaten.--The amount of food eaten is what was served less what was left on the plate uneaten. Uneaten edible food should not be included in the entry.

There are several ways the men might be requested to enter the amounts of food they eat, as table 1 shows. They will not all give the same degree of accuracy.

Therefore, case by case the interviewer will have to determine the best one of the recommended ways for each man and wife to follow.

In table 1 the ways of obtaining food amount are listed in preferred order. It will be noted that first preferences are usually given to --

- 1. The cooked (or prepared) rather than the raw (or unprepared) amount of food eaten.
- 2. Weight of edible portion. It is more important to weigh meat and other foods which cannot be measured easily than foods which lend themselves to household or dimensional measure.
- 3. Weight in grams for solids and semi-solids
- 4. Fluid ounces for liquids.

Gram scales are to be left in all homes. It is important to put the scale on a level surface in a well lighted spot; if possible place it at eye level. If there is no convenient eye level spot it may be placed below eye level necessitating the weigher to stoop or squat. Never place scales above eye level unless a ladder is to be used. Each man should be provided with a 6-inch plastic clear-view ruler. Even though home food is weighed, it will be needed to measure food eaten out.

Practical demonstrations with food on hand in the home should be used in training each man and his wife in reporting his food consumption. Get the man and his wife to participate in the weighing, measuring, and recording. Actually fill a copy of a Sec. C form for a full day and leave it in the home for reference. From the food on hand in the home it may be possible to fill in most of the menu the man had during the previous 24 hours. This is not to be used as part of the week's food record.

It is especially important to give the man adequate instruction-- (1) in estimating the amount of food in glasses, cups, cream pitchers, scoops, dippers, serving spoons, and other serving containers used by restaurants, (2) in measuring or otherwise estimating the size of potatoes, oranges, slices of cake, cuts of pie, and other foods high in calories or nutrients that are eaten frequently by the man, and (3) in entering the amounts eaten. The amounts in col. (2) should agree with the description in col. (1). For example, if there is an entry of "shrimp, shelled" in col. (1), the weight given for it in col. (2) should be for the shrimp after shelling.

It is well to discuss with the man and his wife the best time to weigh or measure his food. Some men will find it most convenient and least likely to affect their consumption if food is weighed before serving. Others may prefer to have the scales at the table.

Instead of weighing or measuring second servings of a food, an estimate based on the first serving can be made. If a man had, by weight 125 grams of roast beef as a first serving and estimates he took about two-thirds as much as a second serving, the entry can be raised to 180 grams. Be sure to let the man and wife know about this easy way of estimating second servings. It can also be used to estimate and deduct any uneaten portion of a food.

Fish liver oils and vitamin or mineral concentrates should be recorded when taken.

Form 1. Sec. D. FOOD SET ASIDE FOR PERSONAL USE

It will be easier to get accurate information on foods eaten at home by the participant in small amount frequently if a measured amount of each food of this kind is set aside in a distinctive container for his personal use. Besides this will reduce the number of entries to be made on the daily records. For most men, the following should be among the foods set aside:

1/4 lb. butter or margarine
1 C. sugar

Other foods sometimes taken often that the homemaker may be willing to put in special containers or to get separate packages of for the participant are -- jelly, jam, sirup, honey, peanut butter, cheese, salad dressing, salad oil, catsup, relishes, raisins, ready-to-eat cereals, alcoholic beverages.

Give the homemaker as much help as she would like in measuring and weighing the foods and putting them in containers and in making entries on a Sec. D form.

There are two hazards in setting aside measured amounts of food. One is that other members of the family will use what is in the participant's containers and the other is that the participant will help himself to family supplies. These hazards will be minimized if (1) with the homemaker's permission a blue sticker (provided) is put on each of the participant's containers; (2) each member of the participant's household is told about the importance of refraining from using the foods in these special containers; and (3) the special containers are placed in front of the participant at each meal. Work out with the homemaker the most fool-proof system possible.

It is also important to caution against duplicating entries. For example, it is conceivable to have a vegetable reported as "buttered" that was cooked and served without any table fat. The "buttering" may have been done by the man from his personal container of table fat.

Tell the man to fill Sec. D as follows:

Column (1), Foods set aside.--List foods according to the instructions given for Sec. C, column (1).

Columns (2) - (7), Amount.--Enter weighed or measured amounts following instructions given for Sec. C, column (2). If food is weighed in a container at beginning of record, it should be weighed in the same container at end.

In column (2) enter amounts for foods set aside on the date the record is begun. Use columns (3) to (7) for additional foods set aside later in the record period.

Column (8), Total.--To be filled in office.

Column (9), Left at end of record period.--Enter the amount of each food that was left uneaten when the record was closed.

Column (10), Eaten.--To be filled in the office.

The amount of food set aside (columns 2-7 or column 8) less the amount of food left at end of record period (column 9) equals the amount eaten (column 10).

Form 1. Sec. E. FOOD EATEN AWAY FROM HOME

Section E is a small card that the man can conveniently keep in his vest pocket and have handy to record the food he eats out, at a restaurant or the home of a friend or relative. At each visit the interviewer should collect the filled forms the man has left at home after checking over the entries on them.

The total intake of any man is the sum of the food he has eaten at home reported on Sec. C and D (col. 10) plus the food he has eaten away from home reported on Sec. E. (A summary of each man's food intake is to be made in the office on form 2).

Help each man fill a sample Sec. E form, entering the food he ate out the day of the interview.

Instruct the man in filling Sec. E as follows:

Column (1), Food and description.--Follow instructions for column (1) of Sec. C. If a man is uncertain about the type of food he eats out, he should get the information from his hostess or the restaurant manager if convenient.

Column (2), Amount.--Follow instructions for column (2) of Sec. C. If a man is uncertain about how to estimate the size of his portion, he should get his hostess or the restaurant manager to help him if convenient.

Column (3), Meal.--Enter the code for the meal at which the food was eaten. Note that letter codes for meals are given at the top of each card.

Column (4), Where eaten.--When food is eaten at the home of another, the word "friend" or "relative" will be sufficient here. However, when food is eaten at a school or club dining room, cafeteria, restaurant, or other public eating place, the name of the establishment should be given. The first time an eating place is mentioned on a food record its address should be included, after that the name without address will be sufficient.

The locations of eating places are necessary for the interviewer may need to check with the manager of an establishment.

Form 1. Sec. F. RECIPES

The purpose of Section F is to get recipes for (1) food mixtures for which no food codes for nutritive value are given; and (2) mixtures high in calories or nutrients which occur repeatedly on a given man's record. No recipes for cake or pie should be taken.

Food codes refer to nutritive values for mixtures made according to basic recipes. These are satisfactory for any food mixture that occurs only once or twice on a man's record. However, in the interest of accuracy the nutritive value of the actual recipe is needed for one that has been eaten several times. Therefore, at end of record period, note if any food mixture which is a good source of calories or nutrients has occurred frequently. If it has, get the recipe for it from the man's wife and record it on this form

A Sec F form will not be needed in all cases. When it is as many as four recipes can be put on one sheet

1. Name of recipe: Give name used by family or restaurant. Be sure wherever recipe is mentioned it is called by same name.
2. Dates eaten: Give each date on which recipe was eaten
3. Proportion eaten by participant during period: Enter the part of the recipe the man ate as a fraction. If the man ate an eighth of the recipe given for a casserole at two different times, enter "1/8" twice.

Column (1), Food.--Enter the name of each food in the recipe following the instructions for Sec. C, column (1). Seasonings, spices, flavorings, and water are not needed and should be omitted.

Column (2), Amount.--Enter weighed or measured amounts following instructions for Sec. C, column (2).

Form 1. Sec. G. HISTORY OF WEIGHT

The primary purpose of Sec. G is to find out if the weights of the men have fluctuated greatly during adult life.

Items 1 - 4 (except 2) will be filled in prior to the first visit. Entries in item 5a will be made at the time of the first visit and those in 5b at the final visit. It is preferable to make entries in items 6 to 10 at the time of the first visit; however, time may not permit this. If not, entries may be made at any visit during the week of the food record at which the man is present.

Item 1. Date. Enter date of filling Sec. G.

Item 2. Code. Leave blank.

Item 3. Home address. Be sure to add whether in St. Paul or Minneapolis. Fill at time of opening record.

Item 4. Office address. See item 3.

Item 5. Weight: a. At beginning of record. It is preferable to obtain the man's weight on the scales provided for this study. However, if it is more convenient for the man to use personal scales in the home, or scales convenient to his office, they may be used provided they are consistently accurate.

The man's weight should be taken and entered on the day he starts keeping the record. Entries should also be made of (1) the "date" weight was taken, (2) the "time of day" (encircle A.M. or P.M.), (3) the "last meal eaten" (encircle "B" for breakfast, "N" for noon meal, and "E" for evening meal), and (4) the "clothes worn" indicating what clothing was included--shoes, jacket, etc.

Item 5. Weight: b. At end. Weight should be taken and entered on the last day of the man's record, at the same time of day, after the same meal, and wearing similar clothing.

Item 6. How much did you weigh when you were about 25 years old? It is not necessary for the man to give his weight at precisely age 25. There may be some incident when he was about 25 that will help him recall his weight. For example, his weight when he went into the Armed Services during World War I. Or, he may know his weight when he was in college and whether it went up or down or remained constant in the few years after graduation.

Item 7a. What is the most you have ever weighed since then?
b. The least? Self explanatory.

Item 8a. Has your weight gone up or down more than 5 pounds in the last year? That is, has the man's weight fluctuated more than 5 pounds during the 12 months preceding the interview.

Item 8b. (If yes) Tell when your weight differed as much as 5 pounds from your present weight and how much you weighed. For ease in reporting, the months are listed. For those months in which the man was more than 5 pounds heavier or lighter than his present weight, enter the heavier or lighter weight.

Item 9a. (If little or no weight fluctuation) Do you hold your weight steady-- Without effort? By exercise? By diet? To be asked only of the men whose weights have not varied more than 5 pounds and for whom there are no entries in item 8b.

Item 9b. (If there is fluctuation) Do you try to control your weight--By exercise? By diet? To be asked only of the men for whom there are entries in item 8b.

Item 10a. Are you following a special diet prescribed by a doctor? If from previous conversation the answer is already known, check "yes" or "no" without further questioning.

Item 10b. Do you try to avoid some foods? See item 10a, above.

Item 10c. Do you try to stress some foods? See item 10a, above.

Item 10d. (If yes to a, b, or c) Tell what foods you especially avoid and/or stress. Some foods avoided and/or stressed may have been learned earlier. If so they should only be verified at this point verifying them, may lead the man to add others.

Form 1. Sec. H. PHYSICAL ACTIVITY, RECORD WEEK

Section H is designed to get an estimate of the physical activity of the man during the week of the food record. The data are to be recorded by the interviewer in consultation with the man at the end of the record period.

Items 1 - 3. To be transcribed from records of the Laboratory of Physiological Hygiene, University of Minnesota

Item 4 Last week -- about how many hours did you spend? -- The intent in the questions is to find out whether in general the man's activity should be classified as greater or less (at rest) than sedentary. A sedentary worker is described below:

Position: Standing, walking, seated

Kind of activity: 1 Finger movements

2 Handling, reaching, pulling, and
lifting light tools and materials

Rate of movement: Slow to moderate

Occupational examples: Teacher, business executive, typist,
bookkeeper, office clerk, telephone
operator, tailor, chauffeur, sales
clerk, factory or store foreman

The hours in column (4) should add up to 168 (24 hours x 7 days). However their division by activity are expected to be only approximate. There is no need to press for precision.

Item 4a On your job. First find out the total number of hours the man worked last week.

Ask teachers and those who do administrative or other types of clerical work to divide their time roughly between sitting and standing (or walking).

Ask persons working in stores or factories whether they engage in strenuous physical activity for any appreciable part of their time. If they handle, reach, pull, or lift materials or tools, find out whether these things are moderately heavy, heavy, or very heavy. Also find out whether their rate of movement in handling these things is usually rapid.

Item 4b On hobbies. Consider "hobbies" activities in which the man is a participant. Name the hobby such as playing cards, stamp collecting, painting, square dancing, ice skating, golf, or bowling. If the name of the hobby does not indicate the degree of physical activity, describe it.

Item 4c On recreation. Consider as "recreation" activities in which the man has only spectator interest such as attending the theatre, concerts, or ball games.

Item 4d Home chores. Include work in and around the home such as vacuum cleaning the carpets, painting the walls of a room, and shovelling snow.

Item 4e In sleep, at rest. For bed patients, convalescents, and unemployed aged persons who do no work in the home enter "all" in col. (4).

Item 5a. Was your physical activity during this week typical for this time of year? Find out if there was an appreciable difference in the degree of energy the man exerted last week in comparison with other recent weeks.

Item 5b. If no, how was it different? If man is usually appreciably more or less active than he was last week find out what are his usual activities and how he has been dividing his time among them.

Item 6. Do not fill.

Table 1.--Ways of obtaining amount of food eaten

Type of food	Methods	Other descriptive data to be given
(1) <u>Meat</u>	(2)	(3)
Roasts, chops, steaks, short ribs, spare ribs, and other bony cuts	1. Weighed weight, cooked portion 2. Estimated weight, A.P.--derived from proportion man ate of amount bought for family. Especially useful for bologna, lunch meats, frankfurters	1. Whether a lean, medium, or fat cut 2. Whether or not fat was eaten 3. For bony cuts--whether bone in or boned
Bologna, lunch meats, tongue, corned beef	3. Estimated weight, cooked portion--estimated from similar previous servings	4. For chops and steaks, give type. For example, for steaks specify whether round, sirloin, porterhouse, etc.
Liver, frankfurter, sausage, hamburger, patties	4. Dimensions of cooked portion--length x width x thickness; or diameter x thickness. Take measurements at maximum points of irregular cuts.	
<u>Poultry</u> Sliced poultry	Same as "Roasts, etc."	1. Whether fryer, broiler, roaster or stewing chicken 2. Part of bird--leg, breast, etc.
Leg, thigh, wing, breast, neck, gizzard, liver heart	1. Weighed weight, cooked portion 2. Total weight of bird as purchased and whether live, dressed, or ready-to-cook weight. If weight is not known, give class as frying, roasting, stewing	1. Whether fryer, broiler, roaster, or stewing chicken 2. Part of bird--leg, breast, etc. 3. Whether skin served was or was not eaten
	3. Count and size--small, medium, large	4. Whether bone in or boned

Table 1.--Ways of obtaining amount of food eaten--continued

Type of food	Methods	Other descriptive data to be given
<u>Fish</u> Canned--salmon, tuna, sardines, crab meat, etc.	1. Weighed weight 2. Estimated weight A. P.--derived from proportion man ate of fish in can 3. Household measure--in terms of cup, tablespoon, or scoop (give size of scoop)	1. Whether or not fish was canned in oil 2. If canned in oil, whether or not oil was served to and eaten by man
Fresh--steak, filet, whole	Same as "Roasts, etc."	1. Kind of fish--white, pike, etc. 2. Whether with or without bone
Seafood--oysters, clams shrimp, scallops	1. Weighed weight 2. Count and size--small, medium, large 3. Estimated fluid measure A. P.--derived from proportion man ate of amount bought for family	Whether in shell or shelled
<u>Meat, poultry, fish</u> Stew, soup, hash, croquette, loaf, creamed, a la king, casserole, salad	1. Weighed weight 2. Household measure--cooked portion 3. For croquette, loaf, and other measurable servings, give dimensions 4. Recipe and proportion man had of it	For meat in stews-- 1. Amount of meat 2. Whether a lean, medium, or fat cut 3. Whether or not fat of meat was eaten 4. Whether or not meat was a bony cut
<u>Cheese</u>	1. Weighed weight 2. Household measure 3. Estimated weight--derived from proportion man ate of amount bought for family	Whether rounded, heaping, or scant measure when other than level measure
<u>Egg</u>	Same as "Roasts, etc."	

Table 1.---Ways of obtaining amount of food eaten---continued

Type of food	Methods	Other descriptive data to be given
<u>Egg</u>	1. Weighed weight 2. Number and size---pee wee; small, medium, large, extra large, jumbo. Use U. S. weight classes	Whether in shell or shelled
<u>Grain products</u> Cake, pie, tart, biscuit, muffin	Same as "Roasts, etc."	1. For cake---whether a slice or wedge; kind (angel, sponge, white, chocolate, fruit) and if frosted or unfrosted 2. For pie---kind of filling (fruit, custard chiffon, or meringue) and kind of crust---pastry, graham cracker, etc.
Crackers, cookie, bun, roll	1. Weighed weight 2. Number and dimensions	Kind---sweet, salted, etc.
Bread	Number of slices; weighed weight or approximate dimensions only if slice is unusual in shape, size, or weight	Thin or thick slices
<u>Fruits and vegetables</u> Whole apple, orange, banana or other fruit, whole potato, beet, carrot or other root vegetable	1. Weighed weight 2. Estimated weight from previous servings 3. Dimensions (diameter x length)	Whether peeled or unpeeled
Nuts, dried fruit	1. Weighed weight 2. Number and size---small, medium, large 3. Household measure---for peanuts and other shelled nuts	For nuts---salted or unsalted For stewed fruit---with or without sugar
<u>All other types of food</u> Fluid, creamy, granular---cereal, greens, cut up fruit and other sauces, jelly, peanut butter, salad dressing, catsup, relish, milk, cream, whipped cream, ice cream, broth, gravy, fruit juice, beverage	1. Weighed weight 2. Household measure, E. P.	Whether rounded, heaping, or scant measure when other than level measure

1. The first part of the report is a general statement of the purpose and scope of the study. It is followed by a brief review of the literature on the subject.

2. The second part of the report is a description of the methods used in the study. This includes a discussion of the subjects, the instruments used, and the procedures followed.

3. The third part of the report is a presentation of the results of the study. This is done in the form of a series of tables and graphs.

4. The fourth part of the report is a discussion of the results. This includes a comparison of the results with those of previous studies and a discussion of the implications of the findings.

5. The fifth part of the report is a conclusion. This summarizes the main findings of the study and offers some suggestions for further research.

6. The sixth part of the report is a list of references. This includes a list of all the books, articles, and other sources used in the study.

7. The seventh part of the report is an appendix. This contains any additional material that is relevant to the study but that does not fit into the main body of the report.

8. The eighth part of the report is a list of figures. This includes a list of all the figures used in the report and a brief description of each.

9. The ninth part of the report is a list of tables. This includes a list of all the tables used in the report and a brief description of each.

10. The tenth part of the report is a list of abbreviations. This includes a list of all the abbreviations used in the report and a brief description of each.

